REMARKS/ARGUMENTS

Claims 1-31 are pending. Claims 3-5, 14-16, 20-22 and 29 have been withdrawn. Applicants respectfully request reentry of the withdrawn claims, each of which, depends from an allowable independent claim as discussed below.

Applicants respectfully request consideration of the Information Disclosure Statement filed March 7, 2005. A copy is attached for the convenience of the Examiner.

In paragraph 11, the Office Action rejects Claims 1, 2, 6-13, 17-19, 20-28, 30 and 31 under 35 U.S.C. § 112, first paragraph because the Office Action asserts that the specification does not reasonably provide enablement for generating a periodic perturbation every single time a vortex exists behind the aircraft, such as during cruising flight. In paragraph 12, the Office Action rejects these claims under 35 U.S.C. §112, second paragraph for essentially the same reasons.

These rejections are respectfully traversed because the claims do not recite generating a periodic perturbation every single time a vortex exists behind the aircraft. Further, the specification enables a person in the art to generate a periodic perturbation adjacent an area of creation of a rotating eddy. The specification does not limit this teaching to take off and landing of the aircraft, which are provided as examples. Indeed, the record does not establish that landing and take off are essential steps of the disclosed invention. The specification states at page 1, line 28 *et seq.*, that there are also contra-rotating vortices generated during cruising flight. The specification also states that Applicant's invention is not even limited to an aircraft, but can be applied to other bodies, such as submarines. See page 5, lines 14-19. Thus, the landing and take off of the aircraft limitations are clearly not essential steps. MPEP § 2164.08 provides that claims should not be rejected as broader than the disclosure under 35 U.S.C. § 112, for noninclusion of limitations dealing with factors which must be presumed to

be within the level of ordinary skill in the art. Here, the scope of enablement provided to one skilled in the art by the present disclosure is commensurate with the scope of the claims.

In paragraph 13, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, second paragraph for using the terms "capable" and "such that." Claims 1, 7, 10, 11 and 12 are amended to obviate this rejection.

In paragraph 14, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, second paragraph as being drawn to only one eddy and one perturbation device. In paragraph 15, the Office Action rejects these claims under 35 U.S.C. §112, first paragraph for essentially the same reason.

These rejections are respectfully traversed. Each of the independent claims recites the term "comprising." The term "comprising" is open-ended and does not exclude additional, unrecited elements or method steps. Thus, two perturbations are not excluded. See MPEP § 2111.03. Further, the claims do recite two merging co-rotating eddies. See independent Claim 1, line 2; independent Claim 7, line 2 and independent Claim 10, line 3. The claims also recite an aircraft and an aircraft with two wings Thus, the scope of the claims is commensurate with the disclosure.

In paragraph 16, the Office Action rejects Claims 2, 6, 13 and 17 because the term "area(s)" in Claims 2, 6, 13 and 17 is indefinite.

This rejection is respectfully traversed. The use of the term "area" in the context of the claims "wherein the periodic perturbation is generated in an area adjacent a flap of the wing" provides one of an ordinary skill in the art with sufficient information to practice the invention without undue experimentation. As shown in Figs. 1 and 2, an "area" adjacent a flap of the wing is clear. Furthermore the "area" must allow the periodic perturbation to be generated so as to be adjacent an area where the first eddy is created.

In paragraph 17, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, first paragraph asserting that the specification does not reasonably provide enablement for determining instability modes.

This rejection is respectfully traversed. Determining instability modes is well known to one of ordinary skill in the art, as discussed in the specification at page 3, line 17 *et seq.*, page 5, line 20 *et. seq.* and page 11, line 4 et seq. MPEP § 2164.08 provides that what is well known may be omitted from the specification.

In paragraph 18, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, first paragraph because the Office Action asserts that the specification does not enable one to determine the size or modes of the eddies without undue experimentation.

This rejection is respectfully traversed. Determining the size or modes of the eddies is well known to one of ordinary skill in the art and need not be disclosed. See the specification at e.g. page 5, line 20 *et seq.* and page 11, line 4 et seq.

In paragraph 19, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, second paragraph for omitting the essential step of determining the mode of the core.

This rejection is respectfully traversed because "determining" the mode of the core is not an essential step of "a method for accelerating destruction of a vortex," as claimed. During flight, a vortex is formed, a periodic perturbation can be generated in order to accelerate the destruction of the vortex. There is no need to "determine" the mode of the core each time a vortex is formed, for each flight or portion of the flight of the aircraft. At most, the wavelength of the periodic perturbation is "predetermined." The claims are thus amended to recited a "predetermined wavelength."

In paragraph 20, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, first paragraph because the Office Action asserts that the specification does not define how to determine the required wavelength that would be capable of exciting the internal instability mode of the core of the first eddy.

This rejection is respectfully traversed. Determining the wavelength capable of exciting at least one instability mode of the core is explained in the specification at e.g., from page 11, line 4 to page 13, line 3.

In paragraph 21, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, first paragraph because the Office Action asserts that the specification does not provide enablement to use a perturbation device to create a perturbation wavelength that is capable of exciting the internal instability mode of an eddy core. As stated in the specification at page 5, line 20, *et seq.*, the instability made may be determined empirically. The wavelength of the instability mode can be essentially equal to the mean diameter of the corresponding eddy core. The wavelength of the perturbation to be generated is of the order of a divisor of the most unstable wavelength of the instability mode which is to be excited; and/or located within an instability range of each of the co-rotating eddies of the corresponding wing.

In paragraph 22, the Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §112, second paragraph because the Office Action asserts that the claims omit essential steps of determining the mean diameter of the eddy core, determining the instability modes and determining the amplitude and frequency of the perturbation wavelength.

This rejection is respectfully traversed for similar reasons as provided with respect to paragraph 19-21 above. Briefly, the claimed method does not require a step of "determining" the various values stated in paragraph 22, but at most relies on a "predetermined" wavelength

as now recited in the claims. The specification enables a person skilled in the art to generate the periodic perturbation having a predetermined wavelength, as explained for example from page 11, line 4 to page 13, line 3.

The Office Action rejects Claims 1, 2, 6-13, 17-19, 23-28, 30 and 31 under 35 U.S.C. §102(b) as being anticipated by U.S.P. 3,881,669 to Lessen. This rejection is respectfully traversed.

As discussed above, Applicants have removed the "capable of" language from the claims. Furthermore, Lessen does not disclose or suggest generating a periodic perturbation having a predetermined wavelength, as in independent Claims 1, 7 and 10. Lessen merely states that the momentum flux may be increased or decreased based on three variable conditions, the free air speed, the induced drag and the distance at which it is desired to substantially dissipate the trailing vortex. Lessen merely suggests that the source of injected fluid must be provided with means for supplying the injected fluid at a flow rate which is adequate for the range of anticipated operating conditions. Furthermore, Lessen states that for a given aircraft the conditions of take-off and landing are sufficiently limited that one magnitude of momentum flux will function to dissipate the vortex trailing a given point on an air flow. Thus, Lessen suggests that one flow rate and not a periodic flow rate with a predetermined wavelength is used.

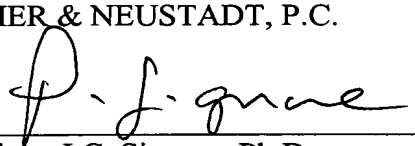
This Amendment is submitted in accordance with 37 C.F.R. § 1.116 which permits entry of amendments canceling claims, complying with any requirement of form expressly set forth in a previous Office Action, or presenting rejected claims in better form for consideration on appeal. Because the amendments are made in response to the rejections under 35 U.S.C. § 112, and do not raise any new issues requiring further consideration and/or search, it is respectfully requested that the amendments be entered under 37 CFR § 1.116.

Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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